02-20-01 A

Express Mail Label No. EK985539075 US

UTILITY PATENT APPLICATION TRANSMITTAL
(Large Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.
SU-7073-L

Total Pages in this Submission
74

02/16/01 J1052 U.S. PTO

TO THE ASSISTANT COMMISSIONER FOR PATENTS
Box Patent Application
Washington, D.C. 20231

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

CONTINUOUS PROCESSES FOR PREPARING CONCENTRATED AQUEOUS LIQUID BIOCIDAL COMPOSITIONS

jc997 U.S. PTO 09/785890 02/16/01

and invented by:

ROBERT M. MOORE, JR. and CHRISTOPHER J. NALEPA

If a CONTINUATION APPLICATION, *check appropriate box and supply the requisite information:*

☒ **Continuation** ☐ **Divisional** ☐ **Continuation-in-part (CIP)** of prior application No.: **09/451,344**

Which is a:

☐ **Continuation** ☐ **Divisional** ☒ **Continuation-in-part (CIP)** of prior application No.: **09/422,025**

Which is a:

☐ **Continuation** ☐ **Divisional** ☒ **Continuation-in-part (CIP)** of prior application No.: **09/088,300**

Which is a: Continued Prosecution Application (CPA) of prior application No. 09/088,300

Enclosed are:

Application Elements

1. ☒ Filing fee as calculated and transmitted as described below
2. ☒ Specification having **22** pages and including the following:
   - a. ☒ Descriptive Title of the Invention
   - b. ☒ Cross References to Related Applications *(if applicable)*
   - c. ☐ Statement Regarding Federally-sponsored Research/Development *(if applicable)*
   - d. ☐ Reference to Microfiche Appendix *(if applicable)*
   - e. ☒ Background of the Invention
   - f. ☒ Brief Summary of the Invention
   - g. ☒ Brief Description of the Drawings *(if drawings filed)*
   - h. ☒ Detailed Description
   - i. ☒ Claim(s) as Classified Below
   - j. ☒ Abstract of the Disclosure

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Application Elements (Continued)

3. ☒ Drawing(s) *(when necessary as prescribed by 35 USC 113)*
   - a. ☒ Formal — Number of Sheets 3
   - b. ☐ Informal — Number of Sheets _____

4. ☒ Oath or Declaration
   - a. ☒ Newly executed *(original or copy)* ☐ Unexecuted
   - b. ☐ Copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional application only)*
   - c. ☒ With Power of Attorney ☐ Without Power of Attorney
   - d. ☐ *DELETION OF INVENTOR(S)*
     Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. 1.63(d)(2) and 1.33(b).

5. ☐ Incorporation By Reference *(usable if Box 4b is checked)*
   The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

6. ☐ Computer Program in Microfiche *(Appendix)*

7. ☐ Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all must be included)*
   - a. ☐ Paper Copy
   - b. ☐ Computer Readable Copy *(identical to computer copy)*
   - c. ☐ Statement Verifying Identical Paper and Computer Readable Copy

Accompanying Application Parts

8. ☐ Assignment Papers *(cover sheet & document(s))*

9. ☐ 37 CFR 3.73(B) Statement *(when there is an assignee)*

10. ☐ English Translation Document *(if applicable)*

11. ☒ Information Disclosure Statement/PTO-1449 ☐ Copies of IDS Citations

12. ☒ Preliminary Amendment

13. ☒ Acknowledgment postcard

14. ☒ Certificate of Mailing
    ☐ First Class ☒ Express Mail *(Specify Label No.):* EK985539075 US

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Docket No.
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Accompanying Application Parts (Continued)

15. ☐ Certified Copy of Priority Document(s) *(if foreign priority is claimed)*

16. ☒ Additional Enclosures *(please identify below):*

4 pg. Request Under 37 C.F.R. 1.607 For Interference With U.S. Patent 6,123,870 w/attachments (U.S. 6,123,870; U.S. Application Serial No. 09/442,025; U.S. 6,068,861)

Request That Application Not Be Published Pursuant To 35 U.S.C. 122(b)(2)

17. ☐ Pursuant to 35 U.S.C. 122(b)(2), Applicant hereby requests that this patent application not be published pursuant to 35 U.S.C. 122(b)(1). Applicant hereby certifies that the invention disclosed in this application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication of applications 18 months after filing of the application.

Warning

An applicant who makes a request not to publish, but who subsequently files in a foreign country or under a multilateral international agreement specified in 35 U.S.C. 122(b)(2)(B)(i), must notify the Director of such filing not later than 45 days after the date of the filing of such foreign or international application. A failure of the applicant to provide such notice within the prescribed period shall result in the application being regarded as abandoned, unless it is shown to the satisfaction of the Director that the delay in submitting the notice was unintentional.

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(Large Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

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Fee Calculation and Transmittal

CLAIMS AS FILED

For	#Filed	#Allowed	#Extra		Rate	Fee
Total Claims	5	- 20 =	0	x	$18.00	0
Indep. Claims	1	- 3 =	0	x	$78.00	$0.00
Multiple Dependent Claims (check if applicable) ☐						$0.00
					BASIC FEE	$760.00
OTHER FEE *(specify purpose)* _____						$0.00
					TOTAL FILING FEE	$760.00

☐ A check in the amount of to cover the filing fee is enclosed.

☒ The Commissioner is hereby authorized to charge and credit Deposit Account No. **01-0659** as described below. A duplicate copy of this sheet is enclosed.

- ☒ Charge the amount of **$760.00** as filing fee.
- ☒ Credit any overpayment.
- ☒ Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17.
- ☐ Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).

Signature

Dated: Feb. 15, 2001

EDGAR E. SPIELMAN, JR.
Registration No. 25,929
Albemarle Corporation
Patent & Trademark Division
451 Florida Street
Baton Rouge, LA 70801-1765

cc:

SU-7073-L

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ROBERT M. MOORE, JR., ET AL. SERIAL NO.: FILED: HEREWITH FOR: CONTINUOUS PROCESSES FOR PREPARING CONCENTRATED AQUEOUS LIQUID BIOCIDAL COMPOSITIONS	DATE: February 15, 2001 GROUP ART UNIT: EXAMINER: NOT ASSIGNED

Assistant Commissioner For Patents
Washington, DC 20231

Sir:

CERTIFICATE UNDER 37 C.F.R. 1.10 - EXPRESS MAIL

I hereby certify that the correspondence stapled hereto and identified below is being deposited with the United States Postal Service as EXPRESS MAIL in an envelope addressed to:

BOX PATENT APPLICATION
ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, DC 20231

"Express Mail" mailing label placed thereon prior to mailing is EK985539075US.

Said correspondence consists of the following:

1. Utility Patent Application Transmittal (4 pages -- duplicate page 4);
2. Specification, Claims, Abstract - 22 pages;
3. Formal Drawings (3 pages - Fig. 1; Fig. 2; and Fig. 3);
4. Declaration, Power of Attorney, And Petition (2 pages);
5. Preliminary Amendment (3 pages);
6. Information Disclosure Statement (1 page - w/attachments [PTO-1449 - 6 pages - citing 93 references -- no copies); and
7. Request Under 37 C.F.R. §1.607 For Interference With U.S. Patent 6,123,870 (4 pages - w/ attachments - U.S. 6,123,870 - 4 pages; U.S. Application Serial No. 09/442,025 - 19 pages; U.S. 6,068,861 - 5 pages).

Return postcard attached hereto but not stapled.

Veronica S. Kesler
Secretary for Edgar E. Spielman, Jr.
Date: February 16, 2001

Phone: (225) 388-7748

EXPRESS MAIL NO. EK985539075US

SU-7073-L

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ROBERT M. MOORE, JR., ET AL.

SERIAL NO.:

FILED: HEREWITH

TITLE: CONTINUOUS PROCESSES FOR PREPARING CONCENTRATED AQUEOUS LIQUID BIOCIDAL COMPOSITIONS

DATE: February 14, 2001

ART UNIT:

EXAMINER: NOT ASSIGNED

Assistant Commissioner For Patents
Washington DC 20231

Sir:

REQUEST UNDER 37 C.F.R. §1.607 FOR INTERFERENCE WITH U.S. PATENT 6,123,870

Applicants request that an interference be declared between the subject application and U.S. Patent No. 6,123,870 ("'870 patent") and/or any divisional or continuing application that may have been filed based thereon. A copy of the '870 patent is attached for the Examiner's convenience. The prompt declaration of an interference is respectfully requested.

Applicants suggest that the following count could be employed: A process for producing a stable oxidizing bromine composition, selected from the group consisting of the processes according to Claim 1 of the Application No. [Case SU-7073-L) and Claim 1 of U.S. Patent No. 6,123,870.

Applicants submit that Claims 1-8 of the '870 patent correspond to the proposed count. Claim 1 to 5 of the instant application correspond to the count and are supported by the specifications as follows.

1.	A process of producing a concentrated, stabilized biocidal composition by adding bromine chloride to an overbased, alkali metal sulfamate solution formed from water, sulfamic acid and alkali metal base wherein the pH of said aqueous alkali metal sulfamate solution is such that the pH of the resulting biocidal composition if at least 7.	Page 8, lines 8-9, states that a concentrated stabilized liquid biocidal composition is produced. Page 7, lines 10-15, describes mixing bromine chloride with an aqueous alkali metal sulfamite solution. Figure 1 describes the sulfamite solution as overbased. See also Page 12, lines 8-9, where the pH of the solution is preferably from about 13.0 to about 14.0, which is certainly overbased. Page 4, lines 17 and 23, describe the resulting product as having a pH of at least 7. Page 9, lines 19-21 (and as clarified in the accompanying Amendment) teaches that the pH of the resulting product is governed by the pH of the aqueous alkali metal sulfamate solution used as the feed to the mixing apparatus.
2.	A process according to Claim 1 wherein the solution is cooled.	Page 12, lines 4-7 and 14-16 describe cooling the solution.
3.	A process according to Claim 3 wherein the solution is cooled so that the temperature is from about 10° C to about 50° C.	Page 5, lines 3-7, and Page 12, lines 4-7, describe maintaining the solution temperature from 10° C to about 50° C.
4.	A process according to Claim 1 wherein the pH of said overbased, aqueous alkali metal sulfamate solution is from about 13.0 to about 14.0.	Page 12, lines 8-9, describes maintaining the pH of the overbased solution preferably from about 13.0 to about 14.0.
5.	A process according to Claim 1 wherein said bromine chloride is added in sufficient amount to obtain an active bromine content of at least about 100,000 PPM (wt/wt) and the atom ratio of nitrogen to active bromine is greater than 0.93.	Page 4, lines 16-24, describes a composition having these characteristics.

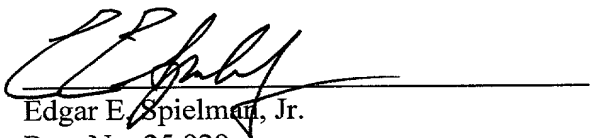
As indicated above, Claims 1 to 5 find clear support in the present application. In addition, each corresponds to the count, as do each of the claims of the '870 patent. Although slightly different terminology is used in the application and the '870 patent, both disclose the same patentable invention--methods for producing stabilized, concentrated aqueous solutions of biocidally active bromine. Applicants note that, as presently worded, all of the claims of the '870 patent are invalid under 35 U.S.C. §112, ¶1 because the caustic solution recited in the first paragraph of independent Claims 1 and 8 (Column 5, Lines 31-39 and Column 6, lines 25-33) cannot simultaneously contain an alkali or alkaline earth hydroxide and an acid stabilizer (e.g., sulfamic acid), yet such an anomaly is expressly permitted by several of the choices for the "halogen stabilizer" recited in Claim 1 and Claim 8. If these infirmities in the '870 claims are corrected, for example, in a reissue application or a continuing application to specify an invention that is physically possible and supported by the '870 specification, then a reissue of the '870 patent will claim the same patentable invention as is claimed in the instant application.

Claim 1 o f the '870 patent, the broadest claim in the patent, otherwise differs somewhat in scope from Claim 1 of the instant application, largely in reciting a step of "cooling the solution" (Column 5, line 42). But this cooling step is essentially meaningless because the claim does not recite when or how cooling occurs (e.g., during or after mixing), to what temperature, at what cooling rate, and the like.

The subject matter of Claim 1, the broadest claim in the instant application, is described and supported in the patent application Serial No. 09/442,025, filed November 17, 1999 (at, for example, Page 4, lines 2-5; Page 6, lines 17-23; Page 7, lines 9 and 11-13; Fig. 1). A copy of Serial No. 09/442,025 is provided for the Examiner's convenience. In addition, Claim 1 is described and supported in the ultimate patent application Serial No. 09/088,300, filed June 1, 1998. The parent application issued as U.S. Patent No.6,068,861 ("'861 patent"). A copy of the '861 patent is provided for the Examiner's convenience. Support for Claim 1 is found, for example, in Column 2, line 64, to Column 3, line 3; Column 3, lines 11-17; and Column 3, line 61 to Column 8, line 2. Thus, Applicants have demonstrated continuous written description support from the ultimate parent application to the present application for at least one species within the proposed count, and,

therefore, they are entitled to priority over the '870 patent which is entitled to a filing date no earlier than April 21, 1999.

Respectfully submitted,



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